



DARK ENERGY
SURVEY

Goals for the June CTIO-1m Observing Run (Discussion)

Observing Run Dates: June 9-15, 2009

Astronomical Sky Calendar for Jun - Jul 2009

***** 2009 JUNE *****

Calendar for Cerro Tololo, west longitude (h.m.s) = 4 43 16, latitude (d.m) = -30 09.9
 Note that each line lists events of one night, spanning two calendar dates. Rise/set times are given
 in Chilean time (4 hr W), for 2215 m above surroundings, DAYLIGHT time used, `*` shows night clocks are reset.
 Moon coords. and illum. are for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

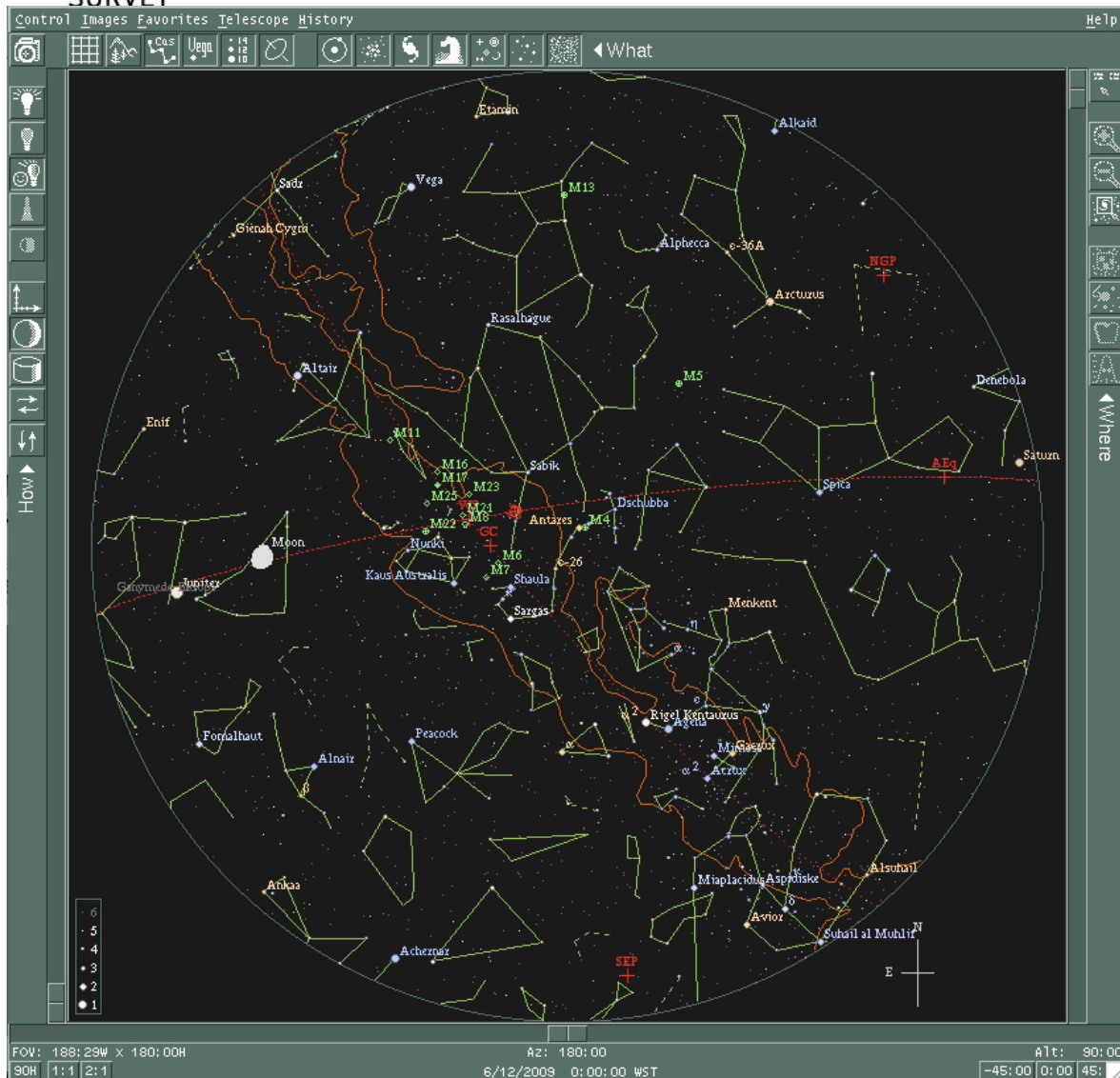
Date (eve/morn) (2009 at start)	JDmid (-2450000)	LMSTmidn	----- Sun: -----				LST twilight:		----- Moon: -----				
			set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec
Mon Jun 01/Tue Jun 02	4984.7	15 59 47	17 58	19 15	6 07	7 24	11 14	22 08	.....	2 48	71	12 15.5	- 6 39
Tue Jun 02/Wed Jun 03	4985.7	16 03 43	17 58	19 15	6 07	7 25	11 18	22 12	.....	3 48	80	13 03.8	-12 08
Wed Jun 03/Thu Jun 04	4986.7	16 07 40	17 58	19 15	6 08	7 25	11 22	22 17	.....	4 47	87	13 53.1	-17 00
Thu Jun 04/Fri Jun 05	4987.7	16 11 36	17 58	19 15	6 08	7 26	11 26	22 21	.....	5 47	93	14 44.1	-21 02
Fri Jun 05/Sat Jun 06	4988.7	16 15 33	17 58	19 15	6 09	7 26	11 30	22 25	16 00	6 45	97	15 36.8	-24 01
Sat Jun 06/Sun Jun 07	4989.7	16 19 29	17 58	19 15	6 09	7 27	11 34	22 30	16 44	7 41	100	16 30.9	-25 50
Sun Jun 07/Mon Jun 08	4990.7	16 23 26	17 58	19 15	6 09	7 27	11 38	22 34	17 33	.....	100	17 25.4	-26 21
Mon Jun 08/Tue Jun 09	4991.7	16 27 22	17 58	19 15	6 10	7 27	11 42	22 38	18 25	.....	98	18 19.2	-25 36
Tue Jun 09/Wed Jun 10	4992.7	16 31 19	17 58	19 15	6 10	7 28	11 46	22 43	19 20	.....	95	19 11.5	-23 39
Wed Jun 10/Thu Jun 11	4993.7	16 35 16	17 58	19 15	6 11	7 28	11 50	22 47	20 17	.....	89	20 01.6	-20 40
Thu Jun 11/Fri Jun 12	4994.7	16 39 12	17 58	19 15	6 11	7 29	11 54	22 51	21 13	.....	83	20 49.4	-16 49
Fri Jun 12/Sat Jun 13	4995.7	16 43 09	17 58	19 15	6 11	7 29	11 58	22 55	22 08	.....	75	21 35.2	-12 17
Sat Jun 13/Sun Jun 14	4996.7	16 47 05	17 58	19 15	6 12	7 29	12 02	23 00	23 03	.....	66	22 19.8	- 7 15
Sun Jun 14/Mon Jun 15	4997.7	16 51 02	17 58	19 16	6 12	7 30	12 06	23 04	23 58	.....	57	23 03.9	- 1 53
Mon Jun 15/Tue Jun 16	4998.7	16 54 58	17 58	19 16	6 12	7 30	12 10	23 08	0 54	.....	47	23 48.7	3 40
Tue Jun 16/Wed Jun 17	4999.7	16 58 55	17 58	19 16	6 12	7 30	12 14	23 12	1 52	.....	37	0 35.1	9 12
Wed Jun 17/Thu Jun 18	5000.7	17 02 51	17 58	19 16	6 13	7 31	12 18	23 17	2 53	.....	27	1 24.3	14 31
Thu Jun 18/Fri Jun 19	5001.7	17 06 48	17 58	19 16	6 13	7 31	12 22	23 21	3 58	.....	18	2 17.4	19 17
Fri Jun 19/Sat Jun 20	5002.7	17 10 45	17 58	19 16	6 13	7 31	12 26	23 25	5 07	.....	10	3 15.2	23 08
Sat Jun 20/Sun Jun 21	5003.7	17 14 41	17 59	19 17	6 13	7 31	12 31	23 29	6 17	15 46	4	4 17.4	25 40
Sun Jun 21/Mon Jun 22	5004.7	17 18 38	17 59	19 17	6 14	7 32	12 35	23 33	7 24	16 45	1	5 22.9	26 30
Mon Jun 22/Tue Jun 23	5005.7	17 22 34	17 59	19 17	6 14	7 32	12 39	23 37	.....	17 53	0	6 29.0	25 27
Tue Jun 23/Wed Jun 24	5006.7	17 26 31	17 59	19 17	6 14	7 32	12 43	23 42	.....	19 06	3	7 33.4	22 35
Wed Jun 24/Thu Jun 25	5007.7	17 30 27	18 00	19 18	6 14	7 32	12 47	23 46	.....	20 19	8	8 34.1	18 14
Thu Jun 25/Fri Jun 26	5008.7	17 34 24	18 00	19 18	6 14	7 32	12 51	23 50	.....	21 29	15	9 30.7	12 51
Fri Jun 26/Sat Jun 27	5009.7	17 38 20	18 00	19 18	6 14	7 32	12 56	23 54	.....	22 36	25	10 23.6	6 53
Sat Jun 27/Sun Jun 28	5010.7	17 42 17	18 01	19 18	6 15	7 32	13 00	23 58	.....	23 40	35	11 13.9	0 43
Sun Jun 28/Mon Jun 29	5011.7	17 46 14	18 01	19 19	6 15	7 32	13 04	0 02	.....	0 41	46	12 02.7	- 5 18
Mon Jun 29/Tue Jun 30	5012.7	17 50 10	18 01	19 19	6 15	7 32	13 08	0 06	.....	1 42	57	12 51.2	-10 57
Tue Jun 30/Wed Jul 01	5013.7	17 54 07	18 02	19 19	6 15	7 32	13 13	0 10	2 42	67	13 40.3	-15 58

Observing Run Dates: June 9-15, 2009



Sky at Midnight on June 12, 2009 at CTIO

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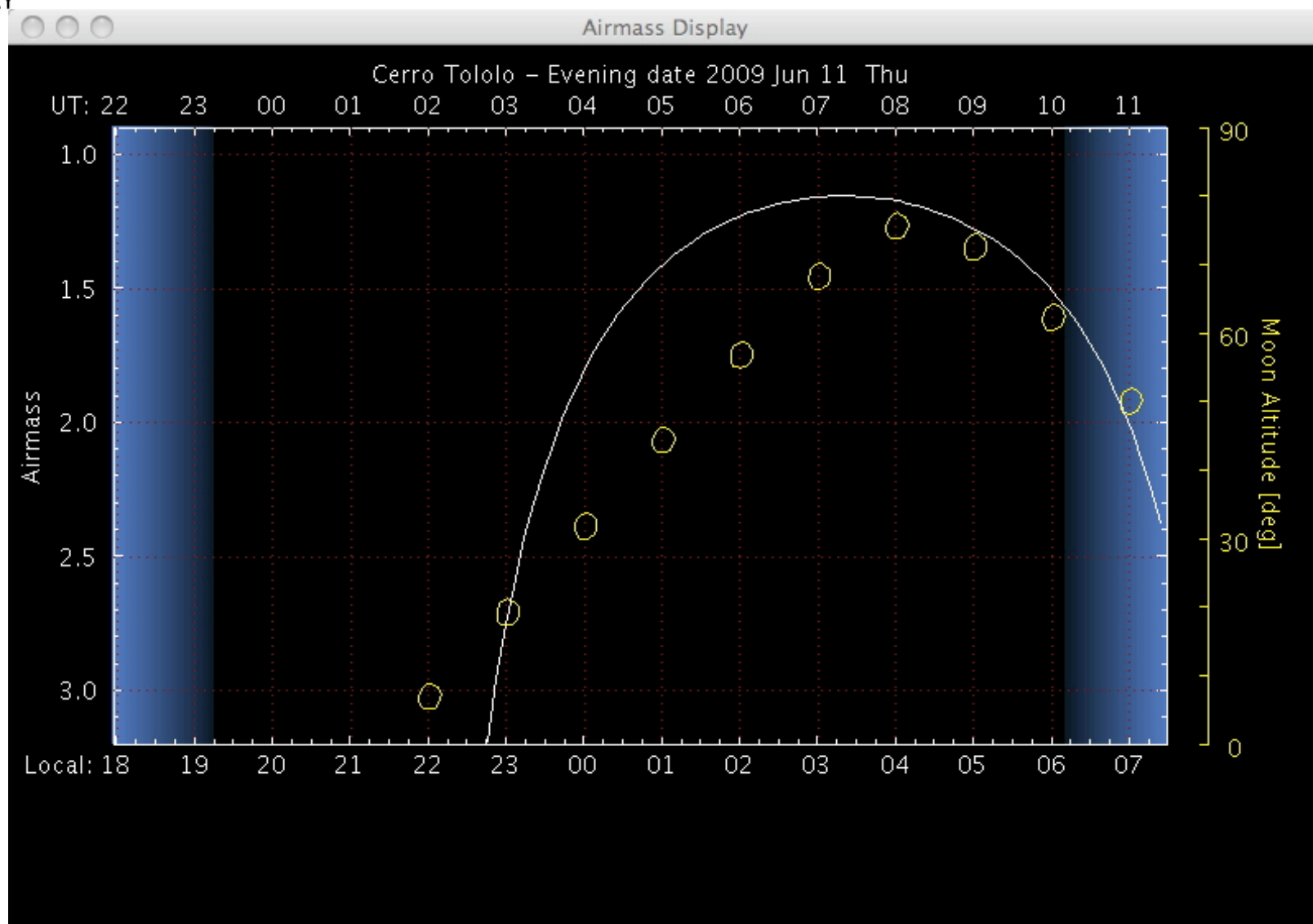


- Moon up most of the night
- Galactic Plane overhead @ midnight
- Parts of the DES footprint (RA > ~20h), including parts of SDSS Stripe 82, become moderately well-positioned in the second half of the night



Airmass of RA=20h00m, DEC=00d00 during night of June 12, 2009 at CTIO

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SISPI Goals

(From Kyler Kuehn's talk on March 18)

SISPI Goals and Contributions

- Baseline Goal: Infrastructure Installation (transparent to users)
 - A) SML augmented with PML (Python Messaging Library)
 - B) Shared Variable Engine/Database(s) storing various data
- Additional Goal: User-Interface Component Testing
 - A) Image Health Tests (KK)
 - B) Guider (FC)
 - C) Shutter(?) (JK, SK, KH, KK)
- Contributions
 - A) Personnel: Three people (KK, JT, IK) working on SISPI at CTIO from June 9-15—and possibly one person (KK) from June 2-8 as well (may not return to US after Rio Meeting)
 - B) Hardware: One dedicated(?) CPU with interface to 1m control/telemetry system *that can be easily decoupled in the event that SISPI testing interferes inordinately with data-taking requirements.*



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SISPI Goals

(From Kyler Kuehn's talk on March 18)

Proposed SISPI Activities During the June Observing Run

Kyler Kuehn
Calibrations Teleconference
March 18, 2009



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SISPI Goals

(From Kyler Kuehn's talk on March 18)

Questions, Next Steps

- What computational hardware will be in place at 1m.?
 - A) Will we need a separate CPU?
 - B) How will we interface to the rest of the system?
- What electronics hardware will be in place at 1m.?
 - A) Can we incorporate the shutter control into the control system (using clock board or other signal pathways)?
- Will we have access to the 1m. prior to the observing run?
 - A) If yes, installation & debugging can occur prior to run
 - B) If no, installation & debugging are daytime activities(?)
that will be ready for testing later in the run (say, 11th - 15th)

To Do:

Determine Hardware requirements, Ship ASAP

Determine SISPI Components to be tested based on constraints of 1m. system configuration and projected Component status.



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Possible Calibration Goals

If no DES grizY filter set:

- Astrometry tests
- Linearity tests
- Scattered (moon)light tests
- Atmospheric stability tests (H₂O-band filter)
- Follow-up of candidate DA white dwarfs (with u-band)

With DES grizY filter set:

- The above, plus...
- Observations of spectrophotometric standards
- Observations in Stripe 82 and Southern u'g'r'i'z' fields
- Observations in the BCS 23h30m-55d field (also in DES)



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Possible Calibration Goals

Possible Targets:

- RA=18:03:20.9, DEC=-30:02:07 (Ricardo Ogando)
 - Close to zenith at middle of night
 - In Baade's Window: lots of stars, low extinction, nice field for astrometry
- NGC 6134/Hogg 19 (Sahar Allam)
 - RA ~ 16:30, DEC~ -49deg
 - Observed in SDSS u'g'r'i'z' with CTIO-1m and UM Curtis-Schmidt
- ...